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AUTHOR Steczak, Cheryl; And Others
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ABSTRACT

A study examined the educational and vocational barriers and opportunities reported by 788 disabled adult clients of the Pennsylvania Office of Vocational Rehabilitation who matriculated in postsecondary education in Pennsylvania between 1980 and 1986. Thirty-six percent (244) of the surveys were returned. Half of the disabled adults matriculating in postsecondary education between 1980 and 1986 were physically disabled. The majority (63 percent) completed a postsecondary vocational training program and desired an educational experience that would prepare them for a professional, technical, or managerial position. Only 14 percent of the rehabilitation office clients had a position in the professional, technical, or managerial occupational cluster after completing their postsecondary education. Of the 244 respondents, fewer clients experienced problems related to accessibility than experienced barriers related to social and emotional integration with classmates in postsecondary education. Forty-eight percent of those responding to the follow-up survey were earning yearly incomes at or below the federal poverty income guidelines for a family of four. The education-related barriers that were cited most frequently were lack of adequate job placement services, supportive counseling, job readiness training, social integration into class, and back-to-school preparation. On-the-job barriers included lack of assistance with work management, help with social integration, sufficiently frequent rest periods, and additional on-the-job training. The study confirmed that efforts to reduce architectural barriers to education and employment are succeeding; however, more needs to be done in the area of focusing nondisabled students' and employers' attention on the abilities rather than on the disabilities of physically disabled persons. (MN)

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PRESENTATION

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A Study of Educational and Vocational Barriers and Opportunities for Employment Experienced by Clients from the Pennsylvania Office of Vocational Rehabilitation Who Matriculated in Post-Secondary Programs, 1980-1986

Cheryl Steczak
June B. Mullins
Delar Singh
David Bostick

This study was financed in part by a Faculty Research Grant, School of Education, University of Pittsburgh.

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ABSTRACT

TITLE:
Disadvantaged and Handicapped -- Research "Survey of Transition Educational and Vocational Barriers and Opportunities reported by Occupational/Vocational Rehabilitation Clients Who Matriculated Post-Secondary Education".

Dr. Cheryl Steczak
Vocational Education Program
Dr. June Mullins
Special Education Program

November, 1987

The purpose of this survey research was to conduct a follow-up study to survey the transition educational and vocational barriers and opportunities reported by 788 disabled, adult clients of the Pennsylvania Office of Vocational Rehabilitation (OVR) who matriculated in post-secondary education in Pennsylvania from 1980-1986. The follow-up survey was written and conducted in a cooperative effort between the Special and Vocational Education Departments of the University of Pittsburgh nd the Pennsylvania Office of Vocational Rehabilitation.

OBJECTIVES

1. To describe the demographic and physical characteristics of the disabled OVR clients.
2. To define the kinds of OVR funded post-secondary educational opportunities OVR clients received in Pennsylvania.
3. To investigated the kinds of occupations these OVR clients subsequently engaged in after their post-secondary education.
4. To describe the kinds of disability-related barriers perceived by OVR clients during their educational, OVR and subsequent vocational experiences.
5. To describe the kinds of disability-related and opportunities encountered during the OVR clients' education and work experiences.

PROCEDURES

1. Summarized unreported demographic data for .788 OVR clients who matriculateds in post-secondary education in Pennsylvania between 1980-86.
2. Developed a follow-up survey which was given a pilot test with ten disabled, adult University of Pittsburgh graduates.
3. Revised survey according to the response and suggestions of those participating in the pilot test.
4. Mailed survey through the Office of Vocational Rehabilitation to the 78 OVR clients in the study population. A return rate of 36 percent (244 surveys) were collected.
5. Analyzed data on an objective-by-objective basis to relate the education experiences with subsequent vocational opportunities identified by the disabled population responding to the questionnaire.

RESULTS

- One half of the disabled adults matriculating in post-secondary education between 1980-86 were physically disabled.
- The majority (63%) of the OVR clients completed a post-secondary vocational training program and desired an educational experience that would prepare them for a professional, technical or managerial position.
- Only 14 percent of the 788 OVR clients had a position in the professional, technical, or managerial occupation cluster after completing postsecondary education.
- Of the 244 respondents fewer clients experienced problems of accessibility than experienced barriers of social and emotional integration with classmates in postsecondary education.
- Forty-eight percent of the 244 follow-up respondents were earning yearly incomes at or below the federal poverty income guidelines for a family of four.

From the research data and literature search of the study, it would appear that more disabled adults are entering post-secondary vocational training and the labor force than ever before. More physically disabled adults are able to achieve this goal than those with cognitive, learning, or psychological disabilities.

The disability-related opportunities of architectural accessibility seem to be increasing. However, the disability-related barriers of social and emotional integration into education and employment are still there; society still seems to refuse the focus on "abilities" rather than disabilities.

PURPOSE OF THE STUDY

The overall goal of this study was to identify barriers to be overcome and strategies needed to optimize higher education and employment for disabled persons.

REVIEW OF THE LITERATURE

Introduction

Maximization of human capital has been recognized as a critical factor in sustaining the nation's economic growth by a number of economists (DeLone, 1978), and educators (Phillips, 1980; Reubens, 1979). There has been emerging recognition that a substantial human capital resource, the disabled, has frequently been overlooked. A disabled individual, according to Phillips (1977), is an individual who has a physical, mental, learning, or emotional impairment which interferes with some life function. While most disabilities can be considered handicapping, the handicap may be more or less severe, in part as the individual, interacting with the environment, meets barriers which may unnecessarily prohibit him/her from attaining goals (Mullins, 1979).

Because of their deviation from what is considered normal physical appearance function or behavior, disabled individuals tend to be devalued by others, and, subsequently, are viewed as being far less capable or competent than is really the case (Gold, 1974). According to Kokaska (1976) the struggle to improve public attitude toward disabled students and employees is far from over and is often the biggest barrier of all to overcome.

Legislation

Some significant actions by the federal government have guided policy and practice with regard to disabled children and adults.

1. The Civil Rights Act, 1964 addressed the rights of disabled people. It specified the right to equal opportunity in education and in the work place.

2. The Education for All Handicapped Children Act, (P.L. 94-142 in 1975), mandates free appropriate education for all handicapped children in the least restrictive environment. A major response to this legislation has been provision of educational programs where disabled students can be placed in settings with non-disabled peers--a policy known as mainstreaming. In 1983 this law was amended. The amendment (P.L. 98-199 - Section 626) entitled "Secondary Education and Transitional Services for Handicapped Youth" authorized funding to provide assistance to youth in transition to postsecondary education, competitive employment, or adult services.

3. The Amendments to the Rehabilitation Act, (P.L. 93-112), 1973 affirmed the inclusion of the handicapped under all civil rights guarantees derived from the Constitution. Sections 503 and 504 of the Amendments addressed the right to education and equal opportunity and non-discrimination in employment.

Barrier identification is essentially the identification of "discriminatory practices" as described in the regulation for implementing Section 504 of the Rehabilitation Act of 1973. In the same regulation, "program accessibility" and "reasonable accommodation" are related to the removal of barriers. Section 504 specifically states that colleges and universities are required to make reasonable adjustments to permit handicapped persons to fulfill academic requirements and to ensure that they are not effectively excluded from programs because of the absence of auxiliary aids.

The Rehabilitation, Comprehensive Services, and Developmental Disabilities Amendments of 1978 (P.L. 95-602) also pertain to the rights of disabled individual to seek appropriate employment and provide incentives for employers to hire the disabled.

4. The Vocational Education Act of 1963 and amendments in 1968 and 1976 set aside 10% of the vocational education funds in each state to be used for vocational training for handicapped youths. The Carl D. Perkins Amendments to the Vocational Education Act, in 1984 mandated vocational assessment, support services, counseling and transitional services for handicapped and disadvantaged youth.

Research

The President's Committee on Employment of the Handicapped (1977) addressed the major concerns which had fostered the Rehabilitation Legislation, that is, high unemployment rates of the disabled people, under utilization of the disabled in the work force, and discriminatory practices in employment of the disabled. They concluded that these problems were even more prevalent and acute in 1977 than before the legislation was written. The clear mandate of this Committee was to call for the removal of barriers to learning and employment in the existing systems for post-secondary education, and job placement for the estimated 25 percent of each state's population that has either a physical, mental, visual, hearing, emotional or learning disability (Phillips, 1980).

Owing and Stocking conducted a nation-wide longitudinal survey in 1980 of non-disabled and mildly disabled high school sophomores. The authors reported that:

- Twenty-two percent of the 1980 sophomores, as compared to 12% of the nonhandicapped students, had dropped out of school between their sophomore and senior years.

- Forty-five percent of these sophomores were in the lowest quartile on combined vocabulary, reading, math, and science tests, compared to only 19% of the nonhandicapped.

- Only 29% were enrolled in vocational education programs.

While disabled youth have difficulty integrating into academic and vocational education, their older counterparts, disabled adults, are more likely to be out of the labor force than in it (Bowe, 1984). A summary of his comparative findings for disabled and non-disabled adults are presented below:

- Nearly 60 percent of disabled men and 75 percent of disabled women who want to and are capable of working are unemployed.

- Among those disabled adults who do work, their jobs were most likely to be service, clerical, farm, craft, laborer, or operative jobs. Non-disabled people were more likely to have professional/technical jobs.

- Disabled workers are more likely to earn incomes below the poverty line.

The Assistant Secretary for Special Education and Rehabilitative Services, Madeline Will, has focused attention on the problems of providing successful job training, employment and transition for school to work for the nation's disabled youth and adults (1984). She recommended implementing the following four-step employment preparation plan for secondary disabled youth:

1. provide prescriptive vocational education training
2. teach work support skills (personal and social skills)
3. build independent living skills
4. provide counseling for better transition from school to work

Some research has focused on higher education for disabled students. Kumar, 1977, in a survey of disabled students at the University of Wisconsin, found that support services were designed to meet the needs of programs rather than the disabled students in these programs. In addition, many of the educational programs were inaccessible to the disabled. Stilwell, et. al. (1983) examined the responsiveness of Kentucky's state colleges to Federal directive concerning the disabled. Their investigation indicated that the institutions have adapted to the needs of disabled students but the degree of adaptation was uneven. Marion and Lovacchini (1983) assessed the efforts made by 155 colleges and universities to provide special services for disabled students. Results showed that basic support services were being provided by most of these institutions of higher education. However, services assuring accessibility for disabled students were expanded or reduced yearly depending on funding available to the institutions.

In Pennsylvania, one study relevant to the present one has been conducted by the Department of Education. This state-wide survey assessed the post-secondary educational status of physically disabled adults (Lewis, et. al, 1977). It was found that only 33% of the physically disabled population in Pennsylvania attended some form of post-secondary education; those attending rated architectural accessibility and special support services as practically non-existent. It might be mentioned that accessibility is a particularly difficult problem in the hilly or mountainous terrain so frequent in this state.

In conclusion it can be said that legislation mandates and professionals recommend changes in transitional services to assure that

disabled men and women have access to education, job training and job placement commeasurate with their considerable potential. Research has pinpointed recurrent problems and successes, and suggests specific principles to be followed throughout the transition process. How to accomplish this goal is an important goal for future research.

The research team in the study below noted that The Office of Vocational Rehabilitation frequently mediates in the process of transition and provides the counseling and financial support necessary for its success. In the present study, OVR records were examined to ascertain hard data on the population. Secondly, a sample of these OVR clients were surveyed to learn of their particular experiences in post-secondary education and their employment histories.

Research Team

An interdisciplinary, intra-gency group cooperated in this research. They are as follows:

From the University of Pittsburgh:

Program in Vocational Education
Cheryl Steczak
Program in Special Education
June Mullins
Delar Singh
Kate McCorkle

Office of Measurement & Evaluation
Sue-Sue Lee

From the Pittsburgh Office of Vocational Rehabilitation
David Bostick

Selection of Subjects of the Study

The subjects for the study were chosen to conform to the following criteria:

All clients received services between 1980-86 in the state of Pennsylvania from the Office of Vocational Rehabilitation.

All clients matriculated in some type of post secondary education program and were funded at least $2500.00 by OVR (Higher education was defined as matriculation at a university, college, community college, or post-secondary vocational training program). All clients had reached OVR case closure before the study commenced. (Positive case closure was designated when the client had been employed for 60 days, and negative case closure was designated when the client or OVR terminated services).

Seven hundred and eighty-eight (788) clients met the criteria.

Research Objectives

1. To describe the demographic and physical characteristics of the OVR clients.
2. To define the kinds of OVR funded post-secondary educational programs OVR clients participated in Pennsylvania, 1980-1986.
3. To investigate the kinds of occupations these OVR clients subsequently engaged in after their post-secondary education and how these related to their earlier experiences.
4. To describe the kinds of disability-related barriers perceived by OVR clients during their educational experiences, OVR experiences and subsequent vocational experiences.
5. To describe the kinds of disability-related opportunities (services) perceived by the OVR clients during their educational experiences, and subsequent vocational

experiences.

6. To identify barriers to be overcome and strategies needed to optimize higher education and employment for disabled persons.

DATA COLLECTION

Demographics and other relevant data had been recorded by OVR counselors on each of the 788 clients when the client was referred and at closure. Much of this data, previously unreported, was transcribed from OVR tapes and is incorporated in the study.

The population identifed above was the target of a follow-up survey developed by the investigators. The following steps were undertaken:

1. A self-reporting follow-up survey was developed (see Appendix A) to get the perceptions of these 788 OVR clients as to what barriers and opportunities they experienced with OVR while pursuing post-secondary education, and in subsequent employment.
2. A pilot test was conducted with ten disabled adults who were graduates of the University of Pittsburgh. In addition, one of the investigators is herself disabled, and her perspective was helpful here and in other aspects of the study.
3. The survey was mailed to the study population (788 clients) through the Pittsburgh Office of Vocational Rehabilitation so that the identities of the OVR clients were unknown to the research team. One hundred two surveys were returned and marked address unknown. Two

hundred forty-eight surveys were returned with four invalids (return rate 36%) giving a sample of 244 clients.

DATA ANALYSIS

The data from the entire population (788 OVR clients) and the data from the sample surveyed (244 OVR clients) are reported below, organized to correspond to the research objectives. Tables are in appendix.

From these data, conclusions and recommendations will be derived by the research team in keeping with the overall purpose of the study.

1.0 To describe the demographic and physical characteristics of the disabled OVR clients.

1.1 Of the 788 OVR clients entering post-secondary education, 418 (53%) were physically disabled; 155 (20%) had psychological disorders; 122 (15%) had learning/cognitive disabilities; 63 (8%) were hearing impaired; 23 (3%) were visually impaired; and 7 (1%) were speech impaired. Sixty percent of the OVR clients were men and 40 percent were women (see Table 1).

1.2 The most frequently reported physically disabilities were diabetes (96 clients), epilepsy (35 clients), and cerebral palsy (32 clients). Congenital and acquired disabilities were reported by 696 (88%) of the clients.

1.3 Accidental disabilities were reported by 92 clients (12%).

1.4 Psychological problems comprised the second category of disabilities and included: psychological disorders, neurotic disorders, personality disorders, and drug dependency.

1.5 Ninety clients were mentally handicapped: mildy mental handicapped (53 clients) and moderatly mentally handicapped (37 clients). Specific learning disabilities were reported by 32 clients.

1.6 The fewest clients reported hearing impairments (63 clients); visual problems (23 clients); and speech disorders (7 clients). These disabilities are usually served in other rehabilitation agencies in Pennsylvania.

1.7 Over 90 percent of the clients (731) were characterized by OVR counselors as having severe disabilities. In addition, 193 (24%) of the clients reported having a secondary disability.

1.8 Of the 244 OVR clients responding to the follow-up survey, 103 clients (42%) had physical disabilities; 64 clients (26%) had psychological disorders; 26 clients (15%) had learning/cognitive problems; 27 (11%) had hearing disorders; 13 (5%) had visual impairments; and 2 (1%) had speech disorders. Clients responded from each of the six disability categories and accurately reflects the larger population of the study (see Table 1).

1.9 Individuals or families referred 276 (24%) of the clients to OVR and 243 clients (30%) were referred by educational institutions.

1.10 At the time of referral to OVR, 450 clients (57%) dependend on their families for financial support; 244 clients (30%) relied on some kind of public assistance; and only 60 clients (8%) had any earnings of their own.

2.0 To define the kinds of OVR funded post-secondary educational programs OVR clients participated in throughout Pennsylvania.

2.1 Before beginning OVR post-secondary education, 275 clients (34%)

had completed 9-11th grade; 345 clients (43%) were high school graduates; and 168 clients (23%) had completed at least one year of post-secondary education.

2.2 At the time of OVR referral, nearly one-third of the clients (243 clients) wanted post-secondary education that would prepare them for a professional, technical, or managerial position; 26 percent (209 clients) wanted education toward a clerical occupation; and 18 percent (143 clients) wanted education leading to a service occupation (see Table 2).

2.3 The most frequently chosen vocational training objectives were: maintenance service worker (34); food service worker (31); LPN/Nurse Aid/Orderly (25); bookkeeper (21); secretary (19); auto mechanics (19); and word processor (16).

2.4 Of the 788 clients, 496 clients (63%) received post-secondary vocational training; 192 clients (24%) completed a two or four year college degree; 51 clients (6%) attended a college but received no degree; 29 clients (4%) received on-the-job training; and 20 clients (3%) completed their GED (see Table 3).

2.5 Of the 244 survey sample clients, 145 clients (59%) had completed a post-secondary vocational training program; 49 clients (21%) had completed a two or four year college degree; 23 clients (9%) attended college but received no degree; 15 clients (6%) received on-the-job training; and 12 clients (5%) completed their GED.

3.0 To investigated the kinds of occupations these OVR clients subsequently engaged in after their post-secondary education.

3.1 In Table 2, the clients' vocational objectives at referral;

vocational occupation at time of closure; and vocational occupation at the time of the sample survey are indicated. At the time of referral, nearly one-third of the clients (31%) wanted an educational experience that would prepare them for a professional, technical or managerial position; 26 percent wanted training towards a clerical/sales occupation; and 18 percent chose training towards a service occupation.

3.2 Where nearly one-third of the OVR clients saw themselves in a professional, technical or managerial occupation at case referral; only 14 percent (108 clients) actually obtained a job in this category; 26 percent (204 clients) were employed in a clerical or sales position at the time of case closure and 12 percent (95 clients) were in service occupations (Table 2).

3.3 About three-fourths (598) of the clients were employed at closure. It is fair to assume that these represented a successful closure, while many or most of the quarter not employed were rated as unsuccessful closures. The greatest discrepancy between an objective and occupation is in the professional, technical, and managerial category where one might speculate that about half the clients opting for it were too ambitious. Otherwise, the objectives and achievement usually were congruent (Table 2).

3.4 By the time of the survey sample of 244 respondents, 22 percent were still employed in clerical and sales occupations; 17 percent were in service jobs; and 14 percent were in professional, technical and managerial occupations.

3.5 The survey sample again seemed to reflect the distribution of the

entire population with respect to distribution of jobs. The percentage of those unemployed rose nine percent, and 67 percent (163) of the clients were employed at follow-up.

3.6 According to Table 4, 511 (65%) of the OVR clients were receiving no salary at OVR referral before their post-secondary education. After education/training, only 167 (21%) of the clients were receiving no salary. At survey sample, 63 (23%) had no earnings of their own.

3.7 At referral, 252 (32%) of the OVR clients were earning at or below the minimum wage of $3.35 per hour and only 25 (3%) of the clients were earning above minimum wage.

3.8 At closure, 43 percent (340) of the clients were earning at or below the minimum wage and this percentage rose to 48 percent (116) at the time of the survey sample. However, 36 percent (281) of the clients were earning above minimum wage at case closure and 27 percent (64) were earning in this range at survey sample.

3.9 At OVR referral, 450 clients (57%) depended on their families for financial support; and at survey sample, of those responding, only 12 percent (29 clients) needed family financial support.

3.10 When the survey sample was asked what helped them find their first competitive job after they had completed education/training 176 clients listed the following: certification/degree (35); family/friends (31); educational job placement services (27); teacher referrals (24) media/want ads (2); internships (16); OVR (11); volunteer work (4); and placement agencies (2).

3.11 Of the 163 clients working at the time of the survey sample, 66%

(107 clients) received benefits as a part of their salary package. Medical, pension and insurance were the most frequently reported benefits received.

3.12 Of the 81 clients (33%) unemployed, 33 clients (44%) said that they were unable to find employment in the area of their education/training; 18 clients (21%) were laid off from their jobs; 16 clients (20%) had health problems that kept them from working; 6 clients (8%) had transportation problems; 3 clients were unable to relocate; two clients were students; and two clients could not find employment that would pay more than their disability allowances.

4.0 To describe the kinds of disability-related barriers perceived by OVR clients during their educational experiences, OVR experiences, and subsequent vocational experiences.

4.1 According to Table 5, of the 244 OVR survey sample respondents, 149 of 60 percent of the clients reported experiencing educational barriers; 171 or 70 percent of the clients reported experiencing on-the-job barriers; and 121 or 49 percent of the clients reported OVR barriers to education or on-the-job success.

4.2 Of the 244 OVR survey respondents, 60 percent listed at least <u>one</u> disability related barrier to learning in their post-secondary experience (Table 6).

4.3 According to Table 6, the most frequently listed barriers were the <u>lack of adequate</u>: job placement services (51 clients); psycholgoical support counseling (47 clients); job readiness training (44 clients); social integration into the class (43

clients) and a "back-to-school" preparation course on how to take notes and tests etc. (-39 clients).

4.4 Fewer clients listed that accessible transportation; accessible classrooms; modified equipment, and empathetic teachers were barriers to education (Table 6).

4.5 Of the 244 OVR follow-up survey respondents, 49 percent or 121 clients listed at least one suggestion to improve OVR services (Table 7).

4.6 According to Table 7, the most frequently listed suggestions were for OVR to include: better placement services (63 clients); job readiness skills training (51 clients); more emotional support counseling (36 clients); and a "back-to-school" preparation course on how to take notes/tests etc. (32 clients).

4.7 Table 8 indicates that 171 or 70 percent of the clients experienced disability-related barriers on-the-job.

4.8 Clients listed that more disability-related architectural barriers were removed than attitudinal barriers from their present employment. The most frequently listed on-the-job barriers were "assistance with work management" (27 clients). See Table.

4.9 Also listed in Table 8 as barriers experienced on-the-job are the need for help towards social integration; more frequent rest periods and increased number of sick days; and additional on-the-job training.

5.0 To describe the kinds of diability-related opportunities perceived by OVR clients during the educational experiences and subsequent employment opportunities.

5.1 Of the 244 clients in the survey sample, 58% (142) listed at least one disability-related service that was available during their educational experience; and 54% (131) reported experiencing at least one disability-related service that was available during their subsequent employment (see Table 9).

5.2 The survey sample clients indicated that there were more disability-related services available at their school (412) than during their employment (346).

5.3 Clients reported that more disability-related architectural services were available at school (153) and on-the-job (206) than were personnel, equipment, or program services. The most frequently listed architectural services available were special transportation, accessible parking, ramped entrances, rest room modifications, and emergency procedures (see Table 9).

5.4 Nearly five times as many disability-related personnel services were reported by clients as being available at school (118) than on-the-job (23). The most frequently reported personnel service was the availability of a special counselor at school.

5.5 Tape recorders, modified typewriters/calculators, and modified equipment/tools were the most frequently checked disability-related equipment services available at school and on-the-job.

5.6 Clients reported that fewer disability-related program services were available at school (42) and on-the-job (18) than were architectural, personnel, and equipment services.

CONCLUSIONS AND RECOMMENDATIONS

A comparison of the literature search and data supplied by this study suggested the following conclusions and recommendations:

1.0 Disabled teenagers continue to drop out of high school between 9-11th grade.

2.0 More disabled adults are entering post-secondary vocational education than ever before (up from 33% in 1977 to 53% in 1986 Pennsylvania).

3.0 More disabled adults complete post-secondary vocational training than complete a four-year college degree.

4.0 More disabled adults complete vocational training and acquire clerical and service occupations than professional, technical or managerial jobs.

5.0 Under-utilization of the disabled in the work force seems to be slowly diminishing (Unemployment is down from 60% in Bowe, 1984 to 33% in Steczak, Mullins, 1987).

6.0 Of those who are employed, the majority of disabled adults continue to earn at or below the minimum wage.

7.0 Disabled adults continue to train in the areas of maintenance, food service, health, clerical, operative and craft occupations.

8.0 Disabled adults credited their post-secondary education as the most important factor in helping them find their first competitive job.

9.0 Of those unemployed, one-half were unable to find employment in the area of their education.

10.0 The majority of the disabled adults experience disability-related barriers during their educational and on-the-job experience.

11.0 Few disabled adults listed architectural accessibility as a barrier at school or on-the-job. (Thirty-three percent did so in Pennsylvania in 1977).

12.0 The barriers at school are the lack of adequate job placement services, support counseling, job readiness training, social integration into the class, and a "back-to-school" preparation course. The barriers on-the-job were: assistance with work management, help towards social integration, frequent rest periods, and additional OJT.

13.0 More disabled adults reported barriers than reported services at school and on-the-job.

14.0 More services are available at school than on-the-job.

15.0 The majority of disabled adults have more disability-related architectural services available at school and on-the-job than personnel, equipment or program services. The architectural services are: special transportation, accessible parking, ramped entrances, rest room modifications, and emergency procedures.

From the research data and literature search of the study, it would appear that more disabled adults are entering post-secondary vocational training and the labor force than ever before. More physically disabled adults are able to achieve this goal than those with cognitive, learning, or psychological abilities.

The disability-related opportunities of architectural accessibility seem to be increasing. However, the disability-related barriers of social and emotional integration into education and employment are still there; society still seems to refuse to focus on "abilities" rather than disabilities.

APPENDIX

Table I

Major Disability Reported on OVR Clients at Referral and by Clients in the Survey Sample

Disability of Clients	Report by Counselors at Referral N = 788		Report by Survey Sample Respondents N = 244	
	n	%	n	%
Physical	418	53	103	42
Psychological	155	20	64	26
Learning/Cognitive	122	15	36	15
Hearing	63	8	27	11
Visual	23	3	13	5
Speech	7	>1	2	>1
TOTAL	**788**	**100**	**244**	**100**

TABLE 2

Vocational Objectives of Clients at Referral and Competitive Vocational Occupation at Time of Closure from OVR*; and Present Occupation of Sample Survey

Occupational Categories	Referral		Closure		Survey Sample	
	n	%	n	%	n	%
Clerical and Sales	209	26	204	26	53	22
Professional, Technical Managerial	243	31	108	14	34	14
Service	143	18	95	12	41	17
Machine Trades	44	6	80	10	11	4
Structural Work	55	7	54	7	14	6
Bench Work	60	8	28	3	4	2
Processing	17	2	16	2	5	2
Agriculture	13	2	12	1	1	1
Miscellaneous	4	>1	1	>1	0	0
Total Employed (Full/Part-time)			598	76	163	67
Total Not Employed Competitively			190*	24	81	33
GRAND TOTAL			788	100	244	100

*23 clients were employed in sheltered workshops.

TABLE 3

Post-Secondary Education Received by OVR Clients at Case Closure and at Sample Survey

Post-Secondary Education	Closure		Survey Sample	
	n	%	n	%
Post-secondary vocational training	496	63	145	59
Completed college/university (2/4 yr. degree)*	192	24	49	21
Attended college/university (no degree)	51	6	23	9
On-the-job training	29	4	15	6
GED	20	3	12	5
TOTAL	**788**	**100**	**244**	**100**

*Of the 24% completing a 2/4 year degree, 9% completed 2 year vocational programs at community colleges, business schools and college/universities.

TABLE 4

Projected Yearly Income of Clients at OVR Referral, OVR Closure, and Income of Sample Survey

Salary	At Referral		At Closure		Sample Survey	
	n	%	n	%	n	%
No salary	511	65	167	21	63	26
Less than $5,000	205	26	188	24	79	33
$5,000-10,000 (minimum wage range)	47	6	152	19	37	15
$10,000-$20,000	25	3	206	26	43	18
Above $20,000	--	--	75	10	21	9
Total	788	100	788	100	243	100

*One employed person did not check salary range.

TABLE 5

Clients Reporting Educational, On-The-Job and OVR Related Barriers to Success* in Sample Survey

Disability Category	Clients Reporting Educational Barriers		Clients Reporting On-The-Job Barriers		Clients Reporting OVR Barriers to Education and On-The-Job Success	
	n	%	n	%	n	%
Physical (103)	60	58	59	57	50	49
Psychological Disorder (63)	34	54	53	84	35	56
Cognitive (36)	28	78	31	86	23	64
Hearing (27)	13	48	16	59	9	33
Vision (13)	12	92	10	83	2	15
Speech (2)	1	50	2	100	2	100
Total Number and Percentage of the 244 Clients Responding	149	61	171	70	121	49

*It cannot be inferred that the same persons within a category who indicated barriers at one stage were the same persons who indicated barriers at another stage.

TABLE 6

What Could the School Have Done That Was Not Done to Help You Get Through School?

Listings by 149 (60%) of the 244 Sample Survey Respondents*

Needs	* Listing Item f
Job Placement Services (transition)	51
Needed More Psychological Support Counseling	47
Job Readiness Training (e.g. resume, interview skills)	44
Social Integration in Class	43
A "Back-to-School Preparation Course (How to Take Notes, How to Take a Test, etc.)	39
References for Future Employees	32
Tutors/Notetaking/Typing Assistance	21
Lack of Modern, Up-to-date Equipment	19
Lacked Modified Equipment	17
Lacked Accessible Classrooms	16
Empathetic Teachers	15
Lacked Assessible Transportation	11
Lacked Career Counseling	7
Needed: more career counseling	7
Cooperative (on site) Education Experiences Not Available or Not Satisfactory	6
Coursework that Matches Industry Standards	2
Advocacy for the Community for Hiring the Disabled	1

*These were open-ended comments and most clients reported experiencing more than one barrier.

TABLE 7

What Could OVR Have Done That Was Not Done To Help You Through School Or On the Job?

Listings by 121 (49%) of the 244 sample survey respondents*

Needs	# Listing Item
Better Placement Services	(63)
Job Counselors to Teach the Client Job Readiness Skills (eg. A Resume and Interview Skills)	(51)
More Emotional Support Counseling	(36)
A "Back-to-School" Preparation Course (How to Take a Test, etc.)	(32)
Tutors/Notetaking and Typing Services For Clients/Course Assignments	(22)
References for Future Employers	(21)
Better Career Assessment/Counseling to Match Clients With Training/Education	(17)
Increased P.R. for OVR Services - Let Everyone Know All The Services OVR Provides	(16)
Counselors to Serve as Mentors in the Vocational School And On The Job (Supported School/Work)	(12)
Closer Monitoring of Clients' Vocational Training	(11)
Modified Equipment for the Disabled	(8)
Job Internships so That Clients Can Gain The Job Experience Needed for Employment	(7)
Assistance in Getting Other Forms of Aid (eg. Food Stamps, Housing Allowance)	(6)
More Financial Assistance for Transportation and Books	(6)
A Structured Follow-Up Service (Additional Training, Counseling, etc.)	(5)
Teacher Inservice to Help Them Understand More About the Disabled	(4)
A Payment Schedule That Allows Payment Before Each Semester	(3)
Only Vocational Training That Matches Industry Standards	(2)
Computers for Students to Receive "Hands-On" Experience	(2)
A Stronger Advocacy to Employers for Hiring the Disabled	(2)

*There were open-ended comments and most clients reported experie ng more than one barrier.

TABLE 8

What Could The Employer Have Done That Was Not Done to Help You be Employed Successfully?

Listings by 171 (70%) of the 244 sample survey*

Needs	# Listing Item
Assistance With Work Management	(37)
Help Toward Social Integration	(28)
On The Job Training (OJT)	(21)
More Rest Periods	(20)
Greater Number of Sick Days	(19)
Automatic Doors	(16)
Modified Work-Day Aternatives	(13)
Supported Work Opportunities	(9)
Elevator Service	(4)
Modified Equipment	(3)
Accessible Building Entrances	(1)

*These were open-ended comments and most clients reported experiencing more than one barrier.

TABLE 9

CLIENTS' AVAILABLE DISABILITY-RELATED SERVICES AT SCHOOL AND AT THE JOB IN SAMPLE SURVEY*

AVAILABLE SERVICES	SCHOOL n=142	JOB n=131
	f	f
Special Modifications		
Special transportation to school/job	31	39
Close accessible parking	29	27
Ramped sidewalks & building entrances	32	34
Accessible elevator essential	16	19
Special restroom modifications	23	27
Available rest facilities	7	23
Special diets available		
Adapted Gymnasium/recreational facilities	-	-
Special emergency procedures (e.g., nonslip floors)	31	37
Total Responses	153	206
Personnel		
Interpreter	7	-
Reader	12	-
Note taker	6	-
Special Counselor	51	16
Medical services or personnel	12	3
Personal care aides	13	2
Mobility helper/escort	2	2
Tutor	15	-
Total Responses	118	23
Equipment		
Telephone/communications Devices	6	17
Computer modifications	5	19
Modified furniture	3	3
Modified equipment/tools	12	10
Modified typewriter/calculator	14	14
Recorded books	7	-
Tape recorder	43	36
Double set of textbooks	7	-
Total Responses	99	99
Program Modifications		
Modified work day/class time	7	5
Availability of sick days	-	-
Assistance with work/study/ management	8	6
Special coaching	-	-
Extended OJT/course/ assignment time	21	3
Help towards social integration	6	4
Alternative assignments/ evaluations	-	-
Waiving of assignments/evaluations	-	-
Total Responses	42	18

*Same respondents checked more than one item.

REFERENCES

Bowe, Frank. Demography and Disability: A Chartbook for Rehabilitation. Arkansas Rehabilitation Research and Training Center, University of Arkansas,, 1983.

DeLone, Richard H. "Youth Employment and the Private Sector." Paper presented at the National Commission on Manpower Policy Conference, Washington, D. C., October, 1978.

Federal Register. Vol. 42, No. 86 (May, 1977) 2-3.

Gold, M. W. "Meeting the Needs of the Handicapped." Paper presented at the National Bicentennial Conference on Vocational Education, Minneapolis, Minnesota, October, 1977.

Kokaska, C. "Recent Expansions in Careers for the Handicapped." Thresholds in Secondary Education, Vol. II (May 1976) 14-15.

Kumar, Vasant. Handicapped Persons in Wisconsin's Vocational, Technical, and Adult Education Districts: Assessment of Educational Technique and Identification of Barriers. Madison, Wisconsin: University of Wisconsin, 1979.

Lewis, James P. and Others. A Preliminary Survey of the Postsecondary Educational Status of Physically Disabled Adults. ED 146368.

Marion, P. B. and Lovacchini, E. V. "Services for handicapped students in higher education: An analysis of national trends." Journal of College Student Personnel, Vol. 2 (March, 1983) 131-138.

Mullins, J. A Teachers Guide to Management of Physically Handicapped Students. 1975, Chas C. Thomas.

National Advisory Committee on the Handicapped. The Unfinished Revolution: Education of the Handicapped. Vol. 2, Annual Report, No. 36. (Washington: Government Printing Office) 1978.

Owing, J., and Stocking, C. "High school and beyond: Characteristics of high school students who identify themselves as handicapped. Washington, DC: National Center for Education Statistics, U.S. Department of Education, 1985.

Phelps, L. A. and Rusch, F. R. "Secondary Special Education and Transition from School to Work: A National Priority." Exceptional Children, Vol. 53, (April 1987) 487-492.

Phillips, Linda. Barriers and Bridges. Sacramento, California: California Advisory Council on Vocational Education, 1977.

President's Committee on Employment of the Handicapped. One in Eleven Handicapped Adults in America. Washington, D. C.: Government Printing Office, 1979.

Reubens, Beatrice G. "Lessons on Employing Youth." Worklife, Vol. 2 (February, 1979), 34-41.

Stilwell, D. N., Stilwell, W. E. and Perritt, L. C. "Barriers in higher education for persons with handicaps: A follow-up." Journal of College Student Personnel, Vol. 24, (July, 1983) 337-343.

Wheman, P., Hill., M. Goodall, P., Cleveland, P., Brooke, V., and Pentecost, J. H. "Job placement and follow-up of moderately and severely handicapped individuals after three years." Journal of the Association for the Severely Handicapped. Vol. 7, (February 1982) 5-16.

Will, Madeline. "Improving Transition from Scho l to Work". Washington, D.C.: Clearinghouse on the Handicapped, Issn. 0565-2804, (1984) 1-5.